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greatest share in the distribution of vegetable life in the northern regions, and the lowest temperature during those months is not found in the most northerly point yet reached by any exploring expedition, but in Winter Island, on the eastern shore of the Melville Peninsula, where the mean temperature during July and August ranges between 34° and 36° F. That spot, which may be called the phytological pole, is nevertheless covered with vegetation, and knowing as we do, that plants do grow not only on a frozen soil, but even, as in Kotzebue Sound, on the tops of icebergs, there is no reason to suppose that the terrestrial pole is destitute of vegetation. The most northerly berry-bearing plant yet recorded is *Vaccinium Vitis-Idœa*, or the cranberry, gathered in Bushman Island, on the northwest shore of Greenland, by Captain W. Penny, or in latitude 76° N., and longitude 66° W. The most northerly berry-bearing genera are *Vaccinium*, *Oxycoccus*, *Rubus*, *Cornus* and *Empetrum*. It is stated that occasionally berries ripen in Lapland. —*Quarterly Journal of Science.*

[We should think so! See Linnæus's "Lapland Flora," and his interesting "Tour in Lapland." In the former almost thirty baccate-fruited plants are enumerated, and at least half of these ripen edible berries. — EDITORS.]

THE FERTILIZATION OF WINTER-FLOWERING PLANTS. — Mr. A. W. Bennett contributes to the first number of the new scientific magazine, "Nature," the results of some observations on the fertilization of those plants which habitually flower in the winter, when there are few or no insects to assist in the distribution of the pollen. He finds that in those wild plants which flower and produce seed-bearing capsules throughout the year, as the white and red dead-nettles, shepherd's purse, chickweed, groundsel, etc., the pollen is uniformly discharged in the bud before the flower opens. Many garden-plants, on the other hand, natives of warmer countries, but which still flower with us in the depth of winter, never bear fruit in this climate, and in them the pollen is not discharged till the flower is fully open. Of this class are the yellow jasmine and the *Chimonanthus fragrans*, or all-spice tree; in the latter species the arrangement of the pistil and the stamens is such as to render self-fertilization impossible. — *Quarterly Journal of Science.*

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ZOOLOGY.

A RARE DUCK. — A specimen of the Brown Tree Duck, *Dendrocygna fulva*, was killed in New Orleans on the 22d of January, 1870, and presented by Mr. N. B. Moore to the Smithsonian Institution. This is the first instance on record of the occurrence of this species so far to the east, although it has been known for some time as an inhabitant of California; in the first place, from specimens found by Mr. Hanters at Fort Tejou. The species occurs sparingly throughout Mexico and Central America and the eastern parts of South America, and is said to have been found nesting near Galveston, Texas, by Mr. Dresser. ⁂

External Gills in Ganoid Fishes.—Steindachner has discovered that in the two species of Ganoid fishes *Polypterus Lapradei* n. sp., and *Polypterus Senegalus* external branchiæ occur when they are young. In his new species, *P. Lapradei,* the branchiæ persist in individuals nineteen inches long. They consist of a long, flattened band, with fringed edges, very like the external branchiæ of the axolotls; there is a single one on each side behind the operculum, and it does not pass the posterior margin of the pectoral fin. In *P. Senegalus* this transitory organ disappears sooner, and is no longer to be found in specimens measuring three and a half to four inches in length. That these are respiratory organs has been proved by the anatomical investigations of Professor Hyrtl.—*Annals and Magazine of Natural History.*

The Limbs of Ichthyosaurus and Plesiosaurus.—Dr. Gegenbaur of Jena, has recently published an essay on the nature of the limbs of Ichthyosaurus and Plesiosaurus. He indicates that the homologies of the paddle of the former are best understood by reference to the fin of the Selachians, especially of the sharks, a most important point. He accepts the view of the great importance of the differences between its limb and that of Plesiosaurus. (In the American genus Polycotylus, though the type of limb is that of the Plesiosauroid, the ulna and radius are those of Ichthyosaurus; the vertebræ resemble also those of the latter.) He indicates that the serial relationship of the carpals, metacarpals and phalanges is to be traced to the corresponding segments of a primary—the radial—series, or ray. He thus lays the basis of the homology of subordinate radii of Protopherus and Bregmacerus, and of the fulcra of sauroid fishes, and therefore a basis for the estimation of the origin of the distal portions of limbs from the simplest form—the simple ray.—E. D. Cope.

The Organs of Hearing and Smell in Insects.—Mr. Lowne, in a recent work on the anatomy and physiology of the flesh fly, states his belief that the organ of smell is located in the third joint of the antennæ, which are remarkably dilated, and are covered with minute openings communicating with little sacs in the interior. The halteres he regards as the organ of hearing, their cavity being filled by a very large nerve terminating in nerve cells, which is connected with a number of small, highly refracting bodies, regularly arranged around the base of the organ.—*The Academy.*

Albino Barn Swallow.—In the month of July of last year, near Saco, Maine, I observed a flock of Barn Swallows (*Hirundo horreorum* Barton), one of the individuals of which was pure white or nearly so.—F. P. Atkinson.

The Sars Fund.—At a parlor lecture delivered in Salem by Mr. E. S. Morse, the sum of twenty-nine dollars and fifty cents ($29.50) was raised for the family of the late Professor Michael Sars, of Christiania. Liberal sums have already been subscribed in London and Paris.